

AN ECONOMETRIC ANALYSIS OF MOTORCYCLE DEMAND IN SARAWAK, MALAYSIA

Nur Zaimah Ubaidillah^{1,*}

Abstract

Motorcycles are considered a primary mode of transport in developing countries due to their affordability and the lack of public transport infrastructure. Nonetheless, it is unclear whether this demand will continue to increase or begin declining into the future due to increases in income or changes in fuel prices. This study aims to understand the long-run factors influencing vehicle ownership, in particular motorcycle ownership, in the context of a state in a developing Asian country, namely Sarawak, Malaysia. This study uses a vector error correction model to analyse the relationship between socio-economic variables (including GDP, fuel price, level of employment and road length) and motorcycle ownership using annual time series data for the period from 1980 to 2017. The results suggest that long-run effects of income and fuel price elasticity regarding motorcycle ownership are estimated to be 0.376 and -0.351 respectively. The study reveals that both income and fuel price are inelastic for motorcycle ownership in the long-run and that motorcycles are considered a necessity good in Sarawak. These results provide useful insight for the government to construct effective policies related to motorcycle demand. While fuel price fluctuations may not significantly affect motorcycle demand, the full removal of fuel subsidies may lead to adverse effects particularly on the overall transport sector. Hence, it is important for policy-makers to carefully design an appropriate fuel subsidy reform along with mitigating strategies particularly for vulnerable groups of the society, to achieve sustainable transport.

Keywords: motorcycle ownership; vector error correction model; fuel price; gross domestic product; climate action

^{1,*}Dr. Nur Zaimah Ubaidillah obtains a Ph.D. in Transport Studies from University of Leeds, United Kingdom. Currently she is a lecturer at Faculty of Economics and Business, Universiti Malaysia Sarawak (UNIMAS), Malaysia. Email: unzaimah@unimas.my